

# Work Order ID 66194

February 7, 2011 12:38:52 PM



Page 1

Item ID: D3254-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Side (LH)

Start Date: 2/07/11 Start Qty: 4.00



Cust Item ID:

Required Date: 2/18/11 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: CL Date: 11/02/07 Tooling:

Date:

Run Start



QC: Date: SPC (Y/N):

Date:

Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D3254                          | Rev A                    |                      |         |        |              |               |               |                  |                |

100



Waterjet

PURCHASING

0.00

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: A

Prog Rev: A

B11-3-9

2004.063

2-Deburr if necessary

(4)

110



QC

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

Quality Control

B11-3-9

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 66194**

February 7, 2011 12:38:52 PM



Page 3

Item ID: D3254-041

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Start Date: 2/07/11 Start Qty: 4.00



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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

| Sequence ID/<br>Work Center ID          | Operation<br>Description                            | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|---|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 150<br><br>HandFinish<br>Hand Finishing | Chemical Conversion Coat per QSI005 4.1<br><br>Memo | 0.00<br><br>0.00     |         |        |              | 4             | 0             | 11-3-14          |                |
| 151<br><br>QC<br>Quality Control        | QC3- Inspect Part Finish<br><br>Memo                | 0.00<br><br>0.00     |         |        |              | 4             | BR            | 11-3-14          |                |
| 153<br><br>Small Fab<br>Small Fab       | <br><br>Memo<br>Install D3248-1 as per dwg          | 0.00<br><br>0.00     |         |        |              |               |               |                  |                |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

**Work Order ID 66194**

February 7, 2011 12:38:52 PM



Page 4

Item ID: D3254-041

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Setup Start



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Item Name: Side (LH)

Start Date: 2/07/11 Start Qty: 4.00



Cust Item ID:

Required Date: 2/18/11 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

157

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

S ul03/14

+4

Quality Control

170

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11:00  
350°  
11:30

H. BL 11-3-15

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

4 d ul03/15

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

February 7, 2011 12:38:51 PM

Page 1

Work Order ID: 66194

Parent Item: D3254-041

Parent Item Name: Side (LH)



Start Date: 2/07/11

Required Date: 2/18/11

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP B 04.10.26 D3254-1 no longer made in-house  
11.02.07 made on W.J. DD verf:JLM

IPP Rev:C

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

|              |  |           |    |  |  |     |    |         |        |         |  |  |  |
|--------------|--|-----------|----|--|--|-----|----|---------|--------|---------|--|--|--|
| M2024T3S.063 |  | Purchased | No |  |  | 100 | sf | 31.9270 | 3.3609 | 13.4436 |  |  |  |
|--------------|--|-----------|----|--|--|-----|----|---------|--------|---------|--|--|--|



2024-T3 .063 sheet



B11-3-9

Location

Loc Qty

Loc Code

MAT22

31.927

117018

114351

31.927

(4)

\* D3248-1

Manufactured No



Doubler

MS20470AD4-5

Purchased No



Rivet, Universal Head

Location

Loc Qty

Loc Code

ST319

1164

116410

1164

B16195 (14)

B20150 (64)

B22136 (14)



2

8

5/11/03/14



18

72

5/11/03/14

11/683 (72)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



|  |               |   |
|--|---------------|---|
| <b>DART AEROSPACE LTD</b>                    |               | <b>Work Order:</b> <u>00078 (06/04)</u> |
| <b>Description:</b> Side (Dual Battery Rack) |               | <b>Part Number:</b> D3254-1             |
| <b>Inspection Dwg:</b> D3254                 | <b>Rev:</b> A | <b>Page 1 of 1</b>                      |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| 5.20              | +/-0.030      | 5.200            | ✓      |        | V B02                |          |
| 4.15              | +/-0.030      | 4.148            | ✓      |        | V                    |          |
| R0.19             | +/-0.030      | .19              | ✓      |        | R.G.                 |          |
| 1.103             | +/-0.010      | 1.103            | ✓      |        | V                    |          |
| 0.300             | +/-0.010      | .300             | ✓      |        | V                    |          |
| Ø0.098            | +0.005/-0.000 | -.101            | ✓      |        | V                    |          |
| 1.300 Pitch       | +/-0.005      | 1.301            | ✓      |        | V                    |          |
| 21.056            | +/-0.010      | 21.056           | ✓      |        | T B01                |          |
| 19.000            | +/-0.010      | 19.00            | ✓      |        | T                    |          |
| 1.003             | +/-0.010      | 1.007            | ✓      |        | V                    |          |
| Ø1.125            | +0.005/-0.000 | 1.125            | ✓      |        | V                    |          |
| 5.403             | +/-0.010      | 5.401            | ✓      |        | V                    |          |
| Ø0.257            | +0.005/-0.000 | -.261            | ✓      |        | V                    |          |
| Ø1.500            | +0.005/-0.000 | 1.503            | ✓      |        | V                    |          |
| 2.750 Pitch       | +/-0.005      | 2.747            | ✓      |        | V                    |          |
| 5.500             | +/-0.010      | 5.496            | ✓      |        | V                    |          |
| 1.653             | +/-0.010      | 1.658            | ✓      |        | V                    |          |
| 3.75              | +/-0.030      | 3.753            | ✓      |        | V                    |          |
| 10.810            | +/-0.010      | 10.805           | ✓      |        | PRO W502             |          |
| 8.00              | +/-0.030      | 8.007            | ✓      |        | V                    |          |
| R0.50             | +/-0.030      | .50              | ✓      |        | R.G.                 |          |
| 2.750 Pitch       | +/-0.005      | 2.748            | ✓      |        | V                    |          |
| 4.125             | +/-0.010      | 4.125            | ✓      |        | V                    |          |
| 1.375             | +/-0.010      | 1.376            | ✓      |        | V                    |          |
| Ø0.128            | +0.005/-0.000 | .134             | ✓      |        | V                    |          |
| 11.000            | +/-0.010      | 10.998           | ✓      |        | PRO                  |          |
| 22.946            | +/-0.010      | 22.946           | ✓      |        | T                    |          |
| R0.30             | +/-0.030      | .30              | ✓      |        | R.G.                 |          |
| 9.90              | +/-0.030      | 9.901            | ✓      |        | PRO                  |          |
| 11.77             | +/-0.030      | 11.773           | ✓      |        | PRO                  |          |
| 1.82              | +/-0.030      | 1.820            | ✓      |        | V                    |          |
| 2.17              | +/-0.030      | 2.171            | ✓      |        | V                    |          |
| 20.10             | +/-0.030      | 20.10            | ✓      |        | T                    |          |
| 0.953             | +/-0.010      | .950             | ✓      |        | V                    |          |
| R0.125            | +/-0.010      | .125             | ✓      |        | R.G.                 |          |
| Grain along 20.10 | N/A           |                  | ✓      |        |                      |          |

|                              |                              |                            |     |
|------------------------------|------------------------------|----------------------------|-----|
| <b>Measured by:</b> <u>B</u> | <b>Audited by:</b> <u>S</u>  | <b>Prototype Approval:</b> | N/A |
| <b>Date:</b> <u>11-3-9</u>   | <b>Date:</b> <u>11/03/09</u> | <b>Date:</b>               | N/A |

| Rev | Date     | Change                     | Revised by | Approved           |
|-----|----------|----------------------------|------------|--------------------|
| A   | 04.07.07 | New Issue P/O D205-579-015 | KJ/JLM     | <u>[Signature]</u> |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

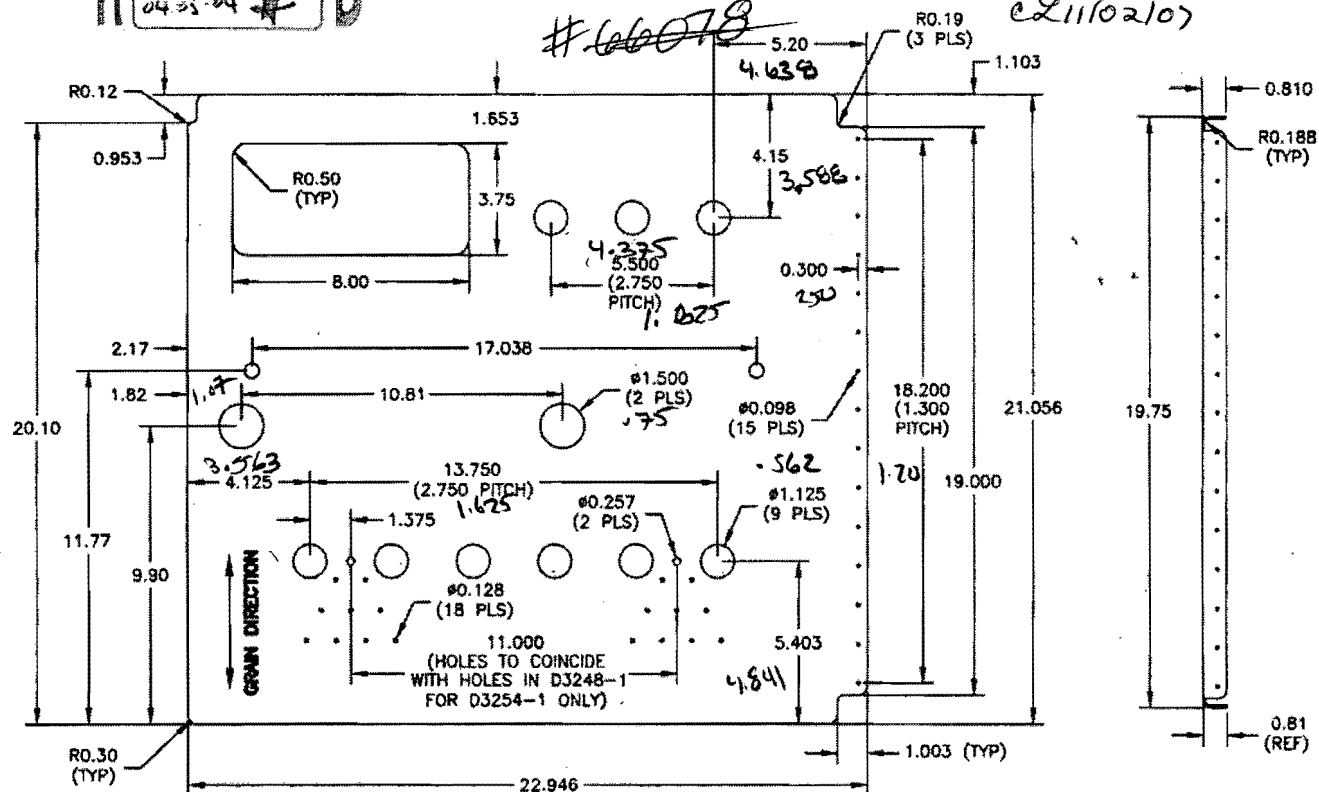
| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

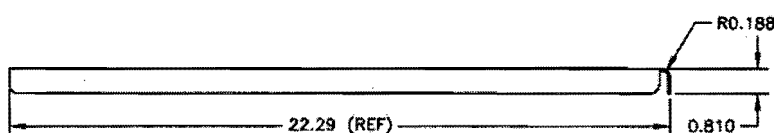


|                  |               |   |                        |
|------------------|---------------|---|------------------------|
| DESIGN<br>#      | DRAWN BY<br># | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br>#     | APPROVED<br># | DRAWING NO.<br>D3254                              | REV. A<br>SHEET 1 OF 1 |
| DATE<br>04.04.06 |               | TITLE<br>SIDE (DUAL BATTERY RACK)                 | SCALE<br>1:6           |
| A                | 04.04.06      | NEW ISSUE   |                        |

RELEASED  
04-05-04

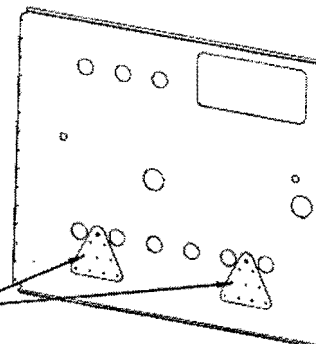


D3254-1/-2 FLAT PATTERN



D3254-1 BEND DETAIL (SHOWN)  
D3254-2 OPPOSITE

INSTALL D3248-1  
USING MS20470A4-5  
RIVETS



D3254-041

NOTES:

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.063 THICK (REF. DART SPEC. M2024T3S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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